Claims

1. (Thrice Amended) A process for the production of a transgenic plant the seeds of which comprise an embryo exhibiting a modified cotyledons development, wherein at least one plant cell is transformed with at least one DNA cosuppression construct comprising a nucleic acid sequence derived from an ASKdzetha (ASKζ)-gene of group II is a fragment of at least 150 base pairs corresponding to the 5' untranslated region and part of the N-terminal coding region and regenerated to a plant whose embryos exhibit the modified development.

2. (once amended) The process according to claim 1, wherein the nucleic acid sequence derived from an ASKdzetha (ASKζ)-gene of group II is a fragment of at least 300 base pairs corresponding to the 5' untranslated region and part of the N-terminal coding region.

3. . The process according to claim 1, wherein the modified development is characterised by the development of an increased number of cotyledons.

4. (Once Amended) The process according to claim 1, wherein the DNA cosuppression construct is an antisense or sense construct or a construct comprising a transposable element wherein the DNA construct is capable of eliminating the expression of an endogenous ASKdzetha (ASKζ)-gene of group II.

5. Delete claim 5

6. Delete claim 6

7. (Once Amended) The process according to claim 1, wherein the nucleic acid sequence derived from an ASK-gene of group II is a fragment of 150 to 350 bp, corresponding to the 5'-untranslated region and a part of the N-terminal coding region of ASKdzetha (ASKζ)-gene of group II.

8. The process according to claim 1, wherein the ASK-gene is in the form of a cDNA or genomic DNA.

9. The process according to claim 1, wherein the DNA construct comprises at least one regulatory element being operably linked to the nucleic acid sequence derived from the ASK-gene of group II and being capable of directing the expression of the nucleic acid sequence derived from the ASK-gene of group II.

10. The process according to claim 9, wherein the regulatory element is a promoter and/or enhancer, in particular the 35 S CaMV-promoter.

11. The process according to claim 1. wherein the DNA construct comprises a transcription termination signal operably linked to the nucleic acid sequences derived from the ASK-gene of group II, in particular a poly A addition site.

12. The process according to claim 1, wherein the DNA construct is cloned into a vector, in particular a plasmid or viral vector.

13. The process according to claim 1, wherein the plant cell is from a monocotyledonous or dicotyledonous plant.

14. The process according to claim 13, wherein the monocotyledonous or dicotyledonous plant is Arabidopsis, brassica, cotton, potato, soya, sugar beet, sugar cane, an ornamental plant, rice, maize, barley or wheat.

15. The process according to claim 1, wherein the plant cell is transformed by transfer of the DNA construct by a method selected from the group selected from: transfer via a bacterium, transfer via virus to the cell, transfer via direct uptake of the DNA construct by microinjection of the DNA construct, transfer via direct uptake of the DNA construct by particle bombardment.

16. The process according to claim 1, wherein the transformed cell is regenerated into a differentiated plant.

17. (Deleted)

18. (Deleted)

19. (Deleted)

20. A plant comprising at least one cell according to claim 13.

21. Seeds and plant derived tissue comprising a genetically modified cell according to claim 20.

22. A plant produced according to the process of according to claim 1.

23. Seeds and plant derived tissue obtained from a plant produced by the process according to according to claim 1.

24. (Once Amended) A transgenic *Arabidopsis* plant the seeds of which comprises an embryo exhibiting a modified cotyledons development, said plant comprising at least one plant cell transformed by a nucleic acid sequence derived from at least one ASKdzetha (ASKζ)-gene of group II wherein at least one embryo exhibits the modified development.